

# **Nuclear Facility Deactivation and Decommissioning (D&D), Remainder of Hanford (RL-0040); and River Corridor Closure Project (RL-0041)**

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**July 14, 2004, Demolition of 2247-B Roof**

## Overview

This section addresses Project Baseline Summary (PBS) RL-0040, *Nuclear Facility Deactivation and Decommissioning (D&D), Remainder of Hanford*. There are three major components to this work scope:

- Deactivation and Decommissioning (M. B. Lackey);
- Reliability Projects (M. M. Belles); and
- Waste Site Remediation (M. B. Lackey).

This section also includes PBS RL-0041, *Nuclear Facility D&D, River Corridor Closure Project*, until this work scope transitions to the River Corridor Contractor.

NOTE: Unless otherwise noted, all information contained herein is as of the end of July 2004.

## Notable Accomplishments

### Deactivation and Decommissioning



**B Laydown Yard**

**233-S Demolition:** All personnel and equipment have been reassigned to other D&D projects and the Project Experience Report has been published. Final project costs are being reviewed and closed out at this time.

**B Plant:** Demolition of B Plant Construction Laydown Yard structures commenced on July 6, 2004. As of July 20, 2004, 21 of the 23 structures have been demolished. The Environmental Restoration and Disposal Facility (ERDF) waste profiles have been approved, and debris is being loaded into waste boxes and shipped to ERDF for disposal.

**U Plant:** Approval of the 30-day notice to issue the U Plant Ancillary Engineering Evaluation/Cost Analysis for the public comment period was obtained on July 23, 2004. The public comment period is scheduled to begin August 23, 2004.

## Reliability Projects

**Mortar-Lining Project Selected for DOE Best-In-Class Award:** A July 9, 2004, memo from Secretary of Energy Spencer Abraham announced the Hanford Site mortar-lining project as a recipient of the DOE 2004 Pollution Prevention Best-In-Class Award. Mortar-lining is an environmentally friendly and cost-effective innovative technique used to refurbish degraded water lines in place for about half the cost of traditional replacement. Mortar-lining protects the groundwater by stopping leaks and assuring water supplies to support remaining Hanford cleanup, deactivation and decommissioning activities.



**Cross-Site Transfer Steam Lines Removed:** These long-unused landmarks of the Hanford landscape, including the steam transfer line between the 200-East and 200-West Areas, have been removed and transferred to the Tri-City Asset Reinvestment Company to be sold as excess Hanford assets to support local economic development.



## Waste Site Remediation

**U Plant Regional Closure:** On July 8, 2004, FH completed back-pulling the direct pulling technology (DPT) casing associated with the last DPT (number 10) for the current installation campaign in support of the capping remedial design activities.

**BC Cribs and Trenches:** FH initiated shallow geophysical mapping of the vadose zone contaminations in the BC Cribs and Trenches on July 12, 2004. This is the first step in the Vadose Zone plume delineation study that will provide a three-dimensional integration of nitrate and technecium 99 beneath the waste sites.

**200 Area Remedial Investigation/Feasibility Study (RI/FS) Work:** FH completed drive casings at the 216-Z-7 Crib during July. The initial fieldwork on 200-LW-1/200-LW-2 was used to establish the bore hole location. The Memorandum of Understanding between the Groundwater Remediation Project and the Central Plateau Surveillance and Maintenance Program for characterization work at the 216-S-7 Crib was approved by both organizations on August 4, 2004.

FH submitted the 200-CW-5, 200-CW-2, 200-CW-4, and 200-SC-1 Feasibility Study and Proposed Plan to RL on August 5, 2004, for their review.

## FY 2004 FH Funds versus Forecast (\$000)

	FY 2004 Anticipated Funding w/Carryover	FY 2004 Fiscal Year Spend Forecast	Variance
<b>RL-0040</b> Nuclear Facility D&D, Remainder of Hanford	\$ 70,710	\$ 64,949	\$ 5,761
<b>RL-0041</b> Nuclear Facility D&D, River Corridor Closure	\$ 12,358	\$ 11,082	\$ 1,276
<b>Total</b>	<b>\$ 83,068</b>	<b>\$ 76,031</b>	<b>\$ 7,037</b>

Note: Infrastructure Reliability has work scope projected to carry over to FY 2005 (\$8.6M).

## FY 2004 Schedule/Cost Performance (\$000)

	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion
<b>RL-0040</b> Nuclear Facility D&D, Remainder of Hanford	44,765	45,079	52,966	315	1%	-7,886	-17%	61,058
<b>RL-0041</b> Nuclear Facility D&D, River Corridor Closure	9,012	9,162	8,875	151	2%	287	3%	12,140
<b>Total</b>	<b>53,776</b>	<b>54,242</b>	<b>61,841</b>	<b>465</b>	<b>1%</b>	<b>-7,599</b>	<b>-14%</b>	<b>73,198</b>

Numbers are rounded to the nearest \$K.

**Schedule Performance (\$465K/1%):** The favorable schedule variance for Central Plateau D&D (\$425K) is due to completion of FY 2003 carryover activities and performing B Plant Laydown Yard demolition activities ahead of schedule.

The unfavorable schedule variance is attributable to Area Waste Site Cleanup (-\$576K) principally due to FY 2004 funding reductions requiring work scope deferral which includes the Z-9 slant borehole and the test pit work and half of the boreholes planned for 200-MW-1. Extended regulator reviews have delayed the U Plant Regional Closure Proposed Plan and issuance of the record of decision. Additionally, the Z-9 drilling and dense nonaqueous-phase liquid investigation at Operable Unit 200-PW-1 started late, and incurred additional delays due to encountering significant below-ground radiological contamination and the detection of high levels of carbon tetrachloride in the drill cuttings.

The favorable schedule variance in Reliability Projects is due to progress on FY 2003 carryover work scope (\$2,262K) and other FY 2004 projects (\$263K), offset by delays in new starts due to Continuing Resolution (-\$1,730K) and A-8 Substation conceptual design validation (-\$351K). Projects totaling \$8.6M are projected to carry over into FY 2005.

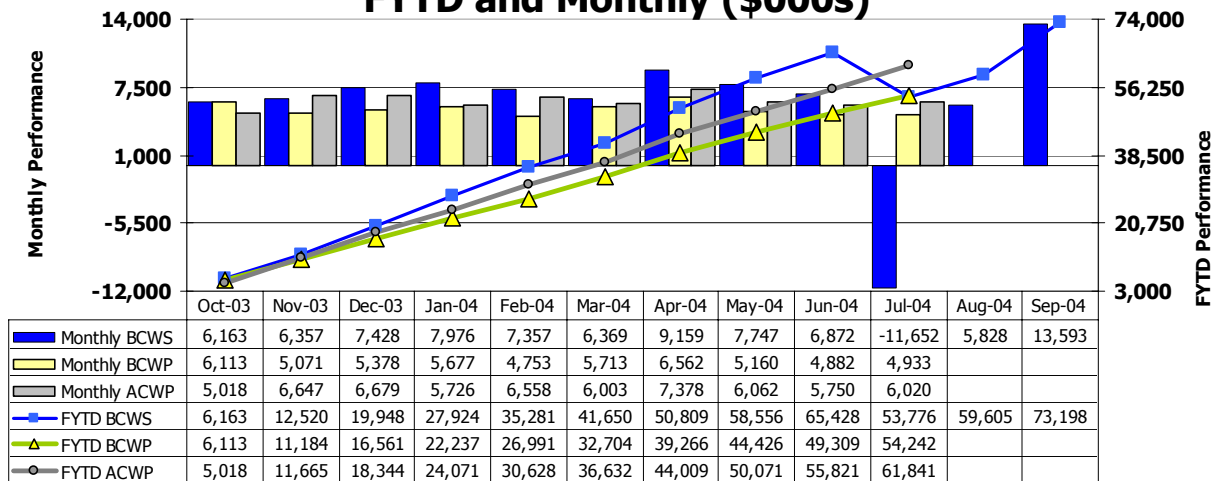
## FY 2004 Schedule/Cost Performance, continued

**Cost Performance (-\$7,599K/-14%):** The unfavorable cost variance for Central Plateau D&D (\$7,716K) is primarily due to 233-S demolition activities being more extensive, thus requiring retention of resources (personnel and equipment) for a longer period of time (approximately six months); this is somewhat offset by favorable variances (\$800K) due to completion of FY 2003 carryover activities and efficiencies associated with the performance of the B Plant Laydown D&D and U Plant Ancillary D&D Projects.

The unfavorable cost variance for Waste Site Cleanup (-\$2,214K) is due to Z-9 (200-PW-1) requiring more sampling/analysis, waste packaging, and transportation support than planned due to encountering higher levels of contamination than expected. Also, rate variance distributions from the under-utilization of the 222-S Lab added over \$350K in unplanned costs to 200-PW-1. The 200-PW-2 Remedial Investigation work that was delayed from FY 2003 has had increased equipment replacement costs, and extra sample shipping and packaging costs due to the 216-A-10 field work. In addition, the incorporation of regulator comments and lessons learned from previous document reviews has required more document preparation support for the RI/FS process, resulting in increased costs. Analytical costs were planned for off-site analysis with a standard 45-day turnaround time. Both the 200-LW-1 and BC Cribs analytical support have been provided by on-site labs with an expedited, quick-turnaround analysis to allow the lab data to be incorporated into the 200-TW-1 Feasibility Study.

The favorable cost variance for Reliability Projects is due to cost efficiencies (\$648K) to be used to dismantle steam lines, characterize the 748 Building, and Post-Closure and Institutional Engineering Controls.

### Performance Analysis FYTD and Monthly (\$000s)





## Milestones

PBS	MSN	Title	Type	Due Date	Actual Date	Forecast Date	Status / Comments
RL-0040	WMG-04-005 M-091-40L	M-91-40L.1.A Submit Quarterly Burial Ground Vent & Substrate Sample	HQ	03/01/04	02/17/04		Completed ahead of schedule
RL-0040	TRP-03-227 M-015-41C	Submit 200-TW-1 & 200-TW-2 OU FS/Proposed Plan to EPA & Ecology	HQ	03/31/04	03/29/04		Completed ahead of schedule
RL-0040	TRP-03-230 M-015-39B	Submit 200-CS-1 Chemical Sewer Group RI Report	HQ	05/31/04	05/27/04		Completed ahead of schedule
RL-0040	WMG-04-006 M-091-40L-002	M-91-40L.1.B Submit Quarterly Burial Ground Vent and Substrate Sample	HQ	06/01/04	05/13/04		Completed ahead of schedule
RL-0040	TRP-03-224 M-013-00N	Submit 1 200 NPL RI/FS (RFI/CMS) Work Plan	HQ	06/30/04	06/30/04		Completed on schedule
RL-0040	TRP-03-309	233-S and 233SA Demolished to Slab on Grade	RL	06/30/04	04/30/04		Completed ahead of schedule
RL-0040	WMG-04-009 M-091-40K	M-91-40K Update 218-E-12B SAP	HQ	06/30/04		07/28/04	SAP submitted to DOE-RL on 06/27/04
RL-0040	TRP-03-233 M-015-43B	Submit 200-PW-2 OU RI Report Including Past Practice Waste Sites	HQ	06/30/04	06/24/04		Completed ahead of schedule
RL-0040	WMG-04-007 M-091-40L-003	M-91-40L.1.C Submit Quarterly Burial Ground Vent and Substrate Sample	HQ	08/15/04			On schedule
RL-0040	TRP-03-236 M-016-66	Initiate Intern. Des.& Auth for RA at 618-10&11	HQ	09/30/04			On schedule
RL-0040	TRP-03-242 M-015-40C	Submit 200-CW-5 U Pond/Z Ditches Cooling Water Group FS & Submit	HQ	10/31/04			On schedule
RL-0040	WMG-05-001 M-091-40L-004	M-91-40L.1.D Submit Quarterly Burial Ground Vent and Substrate Sample	HQ	12/01/04			On schedule
RL-0040	TRP-03-139 M-013-00O	Submit 1 200 NPL RI/FS (RFI/CMS) Work Plan	HQ	12/31/04			On schedule
RL-0040	WMG-05-010 M-091-40J	M-91-40J UPDATE 218-W-3A SAP	HQ	03/01/05			On schedule
RL-0040	WMG-05-005 M-091-40L-005	M-91-40L.2.A Submit Quarterly Burial Ground Vent and Substrate Sample	HQ	03/01/05			On schedule
RL-0040	WMG-05-009 M-091-40I	M-91-40I Update 218-W-4B SAP	HQ	03/01/05			On schedule
RL-0040	WMG-05-006 M-091-40L-006	M-91-40L.2.B Submit Quarterly Burial Ground Vent and Substrate Sample	HQ	06/01/05			On schedule
RL-0040	WMG-05-007 M-091-40L-007	M-91-40L.2.C Submit Quarterly Burial Ground Vent and Substrate Sample	HQ	09/01/05			On schedule
RL-0040	TRP-03-260 M-015-46A	200 Area Chemical Lab Waste OUs Remedial Investigation Report.	HQ	10/31/05			On schedule

## Milestones

PBS	MSN	Title	Type	Due Date	Actual Date	Forecast Date	Status / Comments
RL-0040	TRP-03-248 M-020-39	Submit 216 S-10 Pond and Ditch Closure Plan to Ecology	HQ	11/30/05			On schedule
RL-0040	TRP-03-245 M-015-39C	Submit 200-CS-1 Chemical Sewer Group FS and Submit PP/Proposed	HQ	11/30/05			On schedule
RL-0040	WMG-06-001 M-091-40L-008	M-91-40L.2.D Submit Quarterly Burial Ground Vent and Substrate Sample	HQ	12/01/05			On schedule
RL-0040	TRP-04-324	Issue Action Memorandum for U Plant Ancillary Facilities	RL	12/31/05			On schedule
RL-0040	TRP-04-323	Issue Record-of-Decision for Canyon Disposition Initiative	RL	12/31/05			On schedule
RL-0040	TRP-03-257 M-020-33	Submit Closure/Post Closure Plans for 216-A-10 Crib, Etc.	HQ	12/31/05			On schedule
RL-0040	TRP-03-263 M-015-44A	200-MW-1 OU Remedial Investigation Report	HQ	12/31/05			On schedule
RL-0040	TRP-03-254 M-015-43C	Submit 200-PW-2 OU FS & Proposed Plan/Proposed RCRA Permit Mod	HQ	12/31/05			On schedule
RL-0040	WMG-06-005 M-091-40L-009	M-91-40L.3.A Submit Quarterly Burial Ground Vent and Substrate Sample	HQ	03/01/06			On schedule
RL-0040	TRP-04-320	Demolish Ten U Plant Ancillary Facility Structures	RL	03/31/06			On schedule
RL-0040	TRP-04-321	Demolish 10 B Plant Structures	RL	03/31/06			On schedule
RL-0040	WMG-06-006 M-091-40L-010	M-91-40L.3.B Submit Quarterly Burial Ground Vent and Substrate Sample	HQ	06/01/06			On schedule
RL-0040	WMG-06-007 M-091-40L-011	M-91-40L.3.C Submit Quarterly Burial Ground Vent and Substrate Sample	HQ	09/01/06			On schedule
RL-0040	TRP-03-266 M-015-46B	200 Area Chemical Laboratory Waste OUs Feasibility Study	HQ	09/30/06			On schedule
RL-0040	WDG-06-402	Remediate BC Cribs and Trenches	RL	09/30/06			On schedule
RL-0040	WDG-06-401	Remediation of U Plant Area Waste Sites	RL	09/30/06			On schedule
RL-0040	TRP-04-322	Demolish 12 additional B Plant Structures	RL	09/30/06			On schedule
RL-0041	TRP-03-501 M-092-11-T01	Complete Disposition Options for Hanford Site Nonradioactive NA	RL	09/30/04			On schedule
RL-0041	TRP-04-325	Package, Ship and Dispose of Remaining N Reactor Fuel	RL	03/31/06			On schedule
RL-0041	TRP-04-326 M-092-06-T02	Complete the Disposal/Disposition of Un-Irradiated Metal Fuel	RL	09/30/06			On schedule